

Asbestos and disasters - example of a country in transition

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What is asbestos? What are disasters?

- ✓ A common name for a group of minerals belonging to serpentine and amphibole silicates, fibrous form material.
- ✓ In the first half of the 20th century was recognized as a strategic material for building and because of its efficiency and low cost, it was used extensively until the 1980s.
- ✓ Diseases such as asbestosis, lung cancer and mesothelioma can be induced by asbestos.
- ✓ Asbestos containing material in the form of processed material does not represent a problem-problem occurs when the material is being handling in ways that produce dust, revealing airborne asbestos in atmosphere.
- ✓ Such situations, among others, are disasters such as floods, earthquakes, fires and others. (Fig. 1)
- ✓ The interaction of anthropogenic influences and natural factors make it difficult to predict the occurrence and development of disasters and emergencies.



Fig. 1 Asbestos materials after disaster

Situation in Serbia

- ✓ Used mostly during the 1970s and 1980s. (Fig. 2) Two asbestos mines.
- ✓ Official ban of the asbestos use in products in 2015
- ✓ Unknown quantities of production, waste generation, stocks or distribution of asbestos in environment.
- ✓ Territory of Serbia was affected by events, such as earthquakes (Kraljevo), floods (Danube, Sava, Tamish, Tisza, V. Morava), landslides, etc.
- ✓ Many cities and settlements, large arable areas are still threatened by flooding, sliding of unstable terrain and earthquakes.
- ✓ The trend shows that the number of accidental events (disaster) is increasing from year to year, with a tendency for further growth.
- ✓ The current situation is characterized by the absence of a single database on the spatial distribution of certain natural disasters, i.e. determination of potentially critical zones (floods, landslides, torrents, etc.).

What we do with asbestos waste after disasters?

- ✓ Serbia does not have a waste management plan (nor specifically for asbestos waste) during catastrophic events.
- ✓ Asbestos remains mixed with all the debris, and this further increases the volume of hazardous waste and, therefore. All that waste ends up in landfills that are not adequate for accepting this type of waste.
- ✓ In Serbia, there is no obligation to replace materials containing asbestos. Problem arises due to the occurrence of events that would damage the material, such as collapse due to earthquakes or floods, fires and explosions.
- ✓ If a disaster were to strike a building built in 1970/1980, there is a high probability that asbestos would be found in the waste.

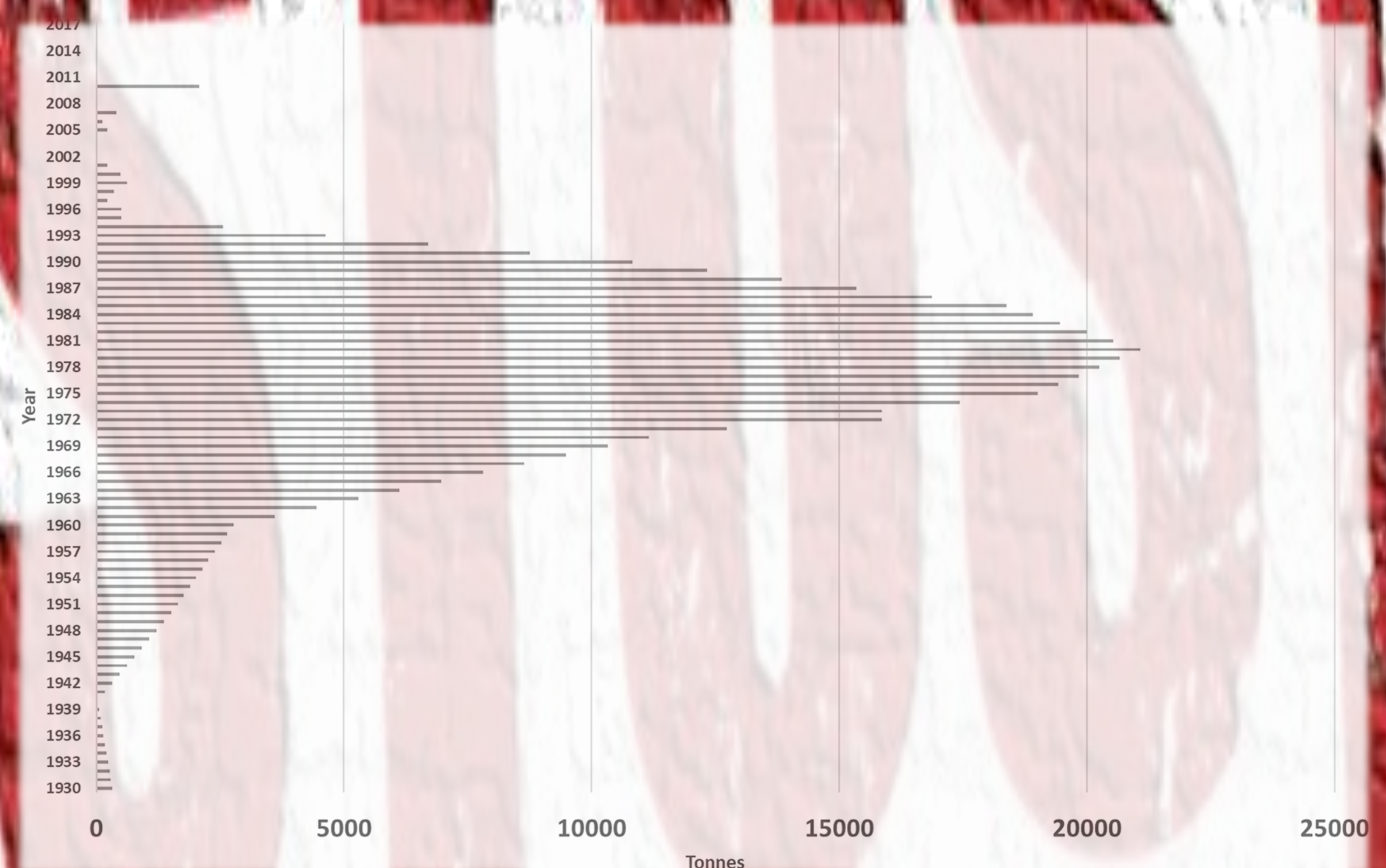


Fig. 2 Consumption of asbestos in Serbia 1930-2017

Conclusion (what is needed to proper manage asbestos after disasters):

- ✓ Research on the quantities and spatial distribution of all asbestos materials used in Serbia, which would facilitate the identification of particularly vulnerable areas during emergency situations.
- ✓ Establishing a database of potential locations that are threatened by the possibility of disasters.
- ✓ Crossing these two databases, it is possible to obtain an adequate platform for the formation of plans for organization and response in case of disasters regarding asbestos and asbestos waste.
- ✓ Because of this health hazard, it is highly recommended that asbestos-containing material damaged by a disaster be repaired, fenced off, isolated, or removed. (Fig. 3)



Fig. 3 Work with asbestos waste